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Combat Crew

strategic air command

OCTOBER 1985

★★★★



Combat Crew

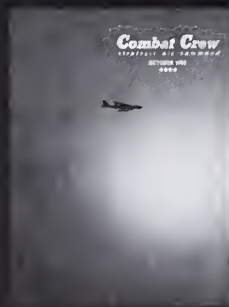
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INSPECTOR GENERAL

COL CHARLES J. WINGERT
DIRECTOR OF SAFETY

STAFF

EDITOR
MAJ BOB NEIDRICK
ASSOCIATE EDITOR
KEN MAASSEN
ART EDITOR
W.A. KIRKPATRICK
EDITORIAL ASSISTANT
M. J. ABBOD



ON OUR COVER

A B-52 heads for home after completing an early-morning low level sortie. For more on this subject, see page four.

MAINTAINING THE B-1B

On 29 Jun 85, exactly thirty years after the delivery of the first B-52, the Air Force accepted the first B-1B during a ceremonial tribute at Dyess AFB TX. Former CINCSAC, General Bennie L. Davis, delivered this magnificent aircraft to the proud and eager men and women of the 96BMW. Since that time, the B-1B has been the focus of a tremendous amount of attention regarding its operational capabilities and role as the nation's newest and most versatile deterrent. On the other hand, only a small amount of information has been publicized concerning the impact the B-1B has and will continue to have on our logistics community. These impacts are, quite clearly, powerful. The delivery of the first B-1B represents a significant if not awesome change to the current way we maintain our bomber force. For the first time in over thirty years, our maintenance squadrons are faced with supporting a totally new, more complex technology. A technology that not only dictates increased flexibility, but a major change in maintenance philosophy as well. For this reason, contractors and Air Force B-1B acquisition logistics managers were charged with insuring the B-1B and all of the associated programs were designed with the maintenance technician in mind. Proof of this can be found by not only looking at the technical designs built into the aircraft, but all other maintenance programs as well.

First though, let's look at the aircraft. The B-1B contains more features to ease maintenance than any other aircraft in the world. For instance, the Central Integrated Test System (CITS) is the cornerstone of the B-1B maintenance concept. This on-aircraft test system, at the push of a button, can troubleshoot problems and accurately isolate them to a single area. By continually monitoring aircraft status, CITS not only informs aircrews of potential problems, but records critical data for maintenance crews as well. Pulsing B-1B electronics, CITS will save thousands of manhours that would

otherwise be needed to troubleshoot and isolate problems. The word self-sufficiency best characterizes this aircraft. The on-board auxiliary power units in concert with CITS will enable our maintenance people to fix problems and generate sorties at forward operating locations without the burden of excess support equipment. The fuel system is also a key feature. The Fuel Center of Gravity Management System will automatically transfer fuel to maintain proper center of gravity. The B-1B's power plant, four F-101 turbofan engines, was designed from a mechanic's perspective too. Each engine is made up of seven different modules. This concept will speed repair at both the depot and base levels, enhancing operational capability. These are just a few features that were designed into the B-1B. There are, of course, many more. The point is that the B-1B was designed for quick, easy maintenance.

To support this new technology, we've backed up the B-1B with a facilities construction program that is second to none. For years our maintenance people have worked in cramped, inadequate facilities. In support of the B-1B program, a major renovation at each of the four B-1B bases is taking place. For example, each B-1B base will have Centralized Aircraft Support System (CASS) and fuel hydrant systems built into selected portions of mass parking ramps. Air, power, fuel, and coolant will be available without the need for several, oversized, bulky pieces of ground support equipment. Some of the aircraft hangars will also have CASS capabilities. Three of the four B-1B bases will build either two- or three-bay hangars — most of them complete with office space, classrooms, and break rooms. The existing hangars will also be renovated to accommodate the B-1B. That's not all, virtually every shop supporting the maintenance effort will either be upgraded, modified, or replaced to meet the logistics demands of the B-1B. New DCM facilities, Field Training Detachments (FTD), squadron buildings, and munitions support fa-

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COMBAT CREW is an internal publication of the Strategic Air Command with the primary purpose of promoting safety. The contents of this magazine are informative and not to be considered as directive in nature. Facts, testimony and conclusions of all mishaps printed herein may not be construed as incrimination under Article 31 of the Uniform Code of Military Justice. All names, dates and places used in conjunction with mishap stories are fictitious. Written permission must be obtained from Headquarters, Strategic Air Command before any material may be reprinted by other than U.S. Air Force organizations. Use of funds for printing this publication has been approved by Hq. USAF, Distribution FX, controlled by IGFE SAC units submit distribution requests through local PDO. Reader to copy ratio 10:1. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

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cilities are all part of the most comprehensive logistics facilities upgrade in Strategic Air Command history.

Training, however, is the key to successful activation of this aircraft. Without it, supporting B-1B sorties would be impossible. Although no training plan is perfect, I believe the programs we've already completed, and those that are still in the planning stages, are outstanding. With the help of the B-1B Systems Program Office (SPO) and the contractors, SAC and the Air Training Command (ATC) have put together a plan to give thousands of technicians the knowledge required to maintain the B-1B. Our Field Training Detachments will be furnished with the most modern training equipment available today. Flight control, armament, avionics, egress, and simulated maintenance trainers are all part of the FTD package. In addition, we've already sent a significant number of technicians to schools with both contractors and the B-1B test team at Edwards AFB. Finally, each Main Operating Base (MOB) will have a cadre of B-1B experienced technicians from Edwards AFB to form the nucleus of the on-the-job training program.

To effect the smoothest transition possible from the B-52 to the B-1B, we've altered our current maintenance concept. New AFSCs have been established, squadrons have been reorganized and more people have been added to compensate for the increased demands of this new weapons system as it matures. Probably the most innovative change, however, is the use of an enhanced crew chief team. Under this concept, a seven-person maintenance team will be assigned to each aircraft. These teams will be headed by either a master sergeant or a qualified technical sergeant. Each team will assume full responsibility for their assigned aircraft. Each member will be fully qualified in CITS operation, troubleshooting procedures, and on-aircraft removal and replacement of numerous B-1B components which used to be a specialist's responsibility.

In the final analysis, it may seem that many of these adaptations are "nice to have" features. Quite to the contrary, each of our new facilities, aircraft systems designs, maintenance plan changes and training programs are necessary for the successful integration of the B-1B. In fact, as the B-1B matures, more programs, improvements, and changes will be necessary to fully utilize and exploit the potential of this weapon system.

Fielding a system as large and complex as the B-1B is a tremendous undertaking. Fortunately we have the right people and programs to make this aircraft fly and, if required, fight.★★

Maj Gen John J. Doran, Jr.
DCS Logistics
Strategic Air Command



B-52 Low Level Abort:

Have you ever aborted low level? If not, have you at least discussed the possibility with your crew? Can you safely fly the airplane out of low level under all conditions, especially those which most typically lead to an abort: bad weather, an aircraft malfunction or crew disorientation? Obviously, the time to plan your abort is now, not during or after one or more of these serious situations.

Weather is our constant companion and its mood can turn nasty in a hurry. Icing, turbulence, and PAV and D values can all put the nix on low level, so know and follow SACR 50-4, Vol 1, Chapter 5 guidance in this regard. AFR 60-16 and SAC Sup 1 provide similar guidance with respect to thunderstorms.

Knowing about potential bad weather in advance can put you miles ahead in planning how to cope with it. Aside from the preflight

weather briefing and an update just prior to low level entry, the crew can get a valuable heads up on unexpected weather through SIGMETS and AIRMETS (see the Flight Information Handbook, Section C). If duties permit, assign a crewmember to record these messages, or if everyone is too busy, get them from the nearest flight service station.

The airplane can also provide some spontaneous reasons for not entering or continuing low level. SACR 51-52, Vol VI, Chapter 6 directs an abort in the event of an engine shutdown for fire or fire indication, or a confirmed or suspected fuel leak. Furthermore, SACR 50-4, Vol 1, Chapter 5 says a B-52 must not enter or continue low level if it loses mapping radar in IFR conditions or at night. Offensive Avionics System (OAS) aircraft must have at least one processor, one multi-functional display and the Attitude Heading Reference System

(AHRS) working.

Perhaps the best rule of thumb is the old adage, "If in doubt, climb out." This is absolutely the case if your doubt is due to an unknown position, especially if coupled with possible unsafe terrain clearance. Don't let false pride stand in the way of common sense. Climb out, come home and live to fly another day.

Having discussed why you might abort, now let's talk about how to prepare for same. Mission planning is the key, as it is to all aspects of a safe, professional flight. First, decide what route of flight you will take if you abort. Options include overflying the low level route ground track, going directly to the exit, or going directly to another point that ties into your original flight plan. Additionally, some bases have backup low level routes in case the primary is unusable due to weather. If that's an option for



COMBAT CREW

Are You Ready?

Capt Steve Weilbrenner
524 BMS, Wurtsmith AFB

you, discuss how to proceed there from any point along the primary route. During thunderstorm season you can establish radial DME fixes to use as intermediate points to depart low level and get back on your flight plan. These points should be four different directions from the center of the low level route, to ensure you quickly have a requested course to give ARTCC. If thunderstorms are involved, you may have to turn immediately, in which case all you need to do is pick the safest pre-planned fix. The IFR wall planning charts or enroute charts can help you choose points that will avoid airways and controlled airspace. Remember also to look on the IFR Enroute Charts for center frequencies along the route. Establishing radio contact with ARTCC is much easier when you have these frequencies in your "hip pocket."

After you have determined your routing, the crew should next develop

a procedure for executing the abort. If safety of flight is not involved, take things one step at a time. Simply obtain clearance before you deviate from your filed route and follow your game plan.

Executing an emergency abort requires more thought. First and foremost, fly the airplane. If it's an emergency abort, something has gone wrong with the weather, the airplane and/or the crew. The most urgent concern is to fly the airplane safely away from the ground. Everyone on the crew must know his part during the abort to avoid confusion on the interphone, especially at night or while in the weather. One technique has the pilot announcing the abort to put everybody in the right frame of mind. Simultaneously, he starts a climb and, if in IMC, squawks emergency. The radar navigator calls with a confidence check on terrain clearance, and if thunderstorms

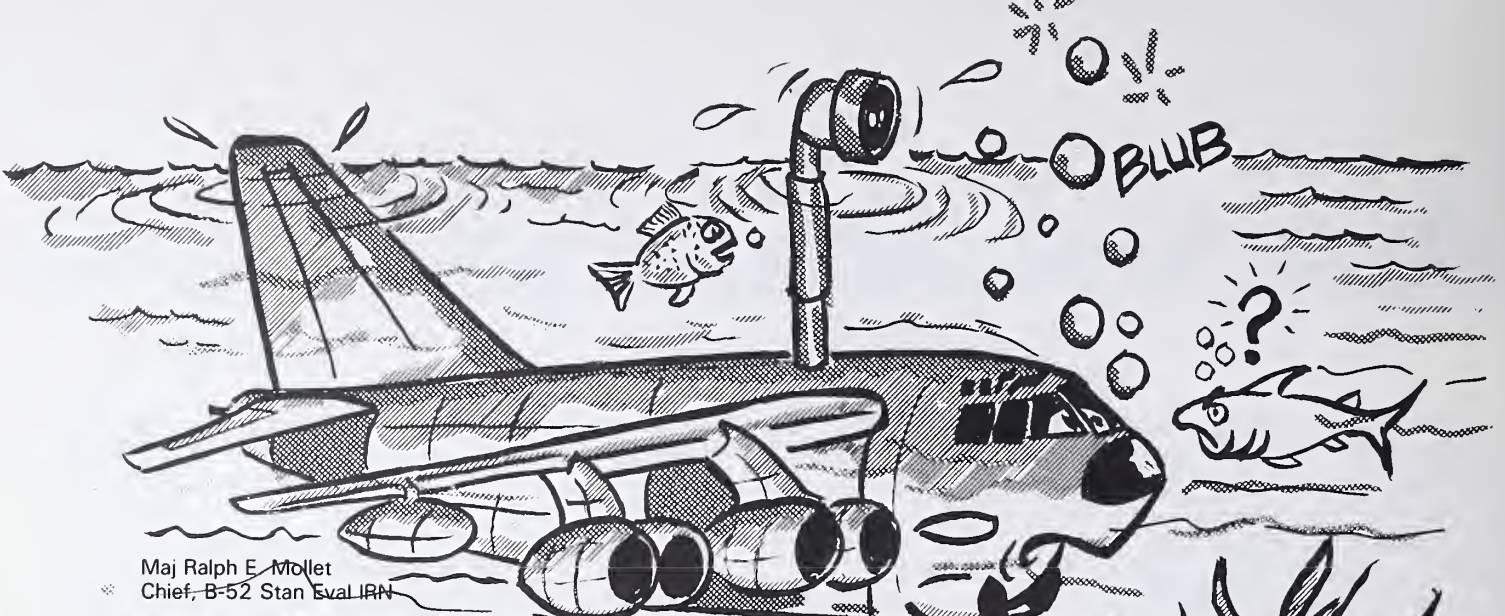
are involved, announces a safe heading. The navigator follows with a minimum safe altitude, especially in a mountainous area. If thunderstorms require an immediate turn, he calls the desired intermediate fix to file with center. The copilot starts the climb after low level checklist and contacts center on the preplanned frequency for clearance to the desired altitude, intermediate fix, and the route beyond. If VMC is encountered at a safe altitude, the pilot must maintain VMC until further clearance is obtained. Once things settle down, the defensive team can work on a hazardous weather report, if that's what caused the abort.

In conclusion, let me say once more, the secret to a safe abort is no secret — plan the flight and fly the plan. There is nothing like the peace of mind that comes with being prepared for the worst — especially if being unprepared can kill you.



OCTOBER 1985





Maj Ralph E. Mollet
Chief, B-52 Stan Eval IRN

Rules to Live By

We have heard a lot lately — and will probably hear a lot more — about terrain avoidance.

That's a natural reaction to the tragic loss of an aircraft and part of its crew. It's also natural that after a period of time, our heightened awareness tends to diminish. While we're busy learning lessons, though, let's try to incorporate a few simple rules into our habit patterns. Then, if we forget the lessons somewhere in the distant future, we'll still fly TA safely by reflex. There are only three of these rules, and although they are written from the perspective of an IRN, they are just as effective for all crewmembers.

Rule 1. The B-52 is neither a subway train, nor a submarine! That is, it can't safely transport its passengers beneath the surface of the earth, or sea. Therefore, if you find that you will be below some terrain during some portion of your route, you must know how far below it you will be. You need to know this to know when you must climb to get over it (see, I told you they were simple rules). Now, the best time to determine the height of all the terrain along your route is not while you are surrounded by it, no matter what scale of chart you are using. The best time is at groundspeed zero, during mission planning. Highlight or write them down if you can't remember them. And while you're at it, share your information with the rest of the crew.

Rule 2. If you try to make the B-52 into a subway train or a submarine, you won't like what happens. The stark facts are enough to scare anyone into not wanting to do this, but the problem is that few, if any, people try it on purpose. So how do we keep from having it happen inadvertently? Remember the terrain heights you learned or wrote down in mission planning? During flight you must constantly check your pressure altimeter to see that you are above the elevation of the highest

terrain near your flight path. Why the pressure altimeter? It's one of the most reliable pieces of equipment you have. It's also quite accurate under all flight, weather and electronic conditions — providing you set it properly. Fact is, the radar altimeter only gives you data on the terrain directly below you. However, by comparing your pressure altimeter reading to the heights of terrain in front of you, you've just given yourself an absolute altitude for that terrain. This is something the radar altimeter can't do, and this technique tells you immediately if you must climb over an obstacle. Now, you can refer to all the other sensors you have (radar scope, EVS visual, radar altimeter, terrain trace) to tell you when to climb. The more important task, for which the pressure altimeter is better suited, has already been accomplished — telling you if you need to climb.

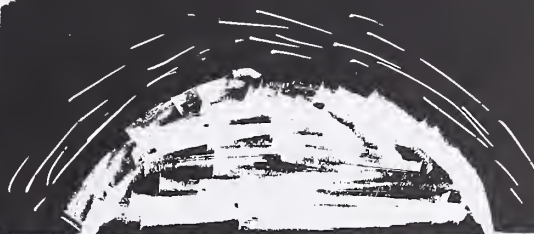
Rule 3. When in doubt, climb. This is the ultimate safety net. If you think you're below that hill in front of you; if you think you've been descending too long or steeply; if you think your equipment may not be telling you what you need to know; **CLIMB!** This may sound too simple, but because we get distracted, or don't want to embarrass ourselves by being wrong, this is exactly what gets missed when aircraft crash. Two final thoughts: 1) The altimeters must all be properly crosschecked before you can trust any of them. The technical orders tell us this should be accomplished at IFR altitude, or as soon as a lower altitude (one within the radar altitude capacity) permits. Descending to 800 feet on the radar altimeter before crosschecking the altimeters is not properly completing this step. 2) If the radar and navigator properly complete their Before Descent Checklist, they will have determined that safe, initial TA altitude they should descend to on their pressure altimeter when they leave IFR.

Courtesy: Castle Commentary

You Have Just Entered THE

TWILIGHT ZONE

Capt Arv Taylor
HQ SAC/IGFF



“Right out of the Twilight Zone.” How often have you heard this phrase used to describe some really weird or unusual event which defies understanding? The Bermuda Triangle, Stonehenge, John Glenn’s encounter with the “sparkles” in space, all these mysteries are potential subjects for the Twilight Zone because we do not have an acceptable, rational and verifiable explanation for them.

Believe it or not, SAC may have its own nominee for the Twilight Zone; the unexplained propensity for major aircraft mishaps to occur during the last 90 days of the year (see figure 1).

“The smart ones will learn from experience and recognize that the last 90 days of the year hold extraordinary potential for disaster.”

Since 1980, over 40% of the command’s Class A flight mishaps have occurred between 1 October and 31 December. For B-52’s the period has been even more devastating because 71% of the B-52 Class A flight mishaps have happened during the last quarter of the calendar year.

Why? Have the sky gods placed some awful curse upon us? Does the cool temperature in the fall make the lifties go away? Or is there some rational explanation which we have not been able to find because our analysis has been incomplete?

A preliminary review of the mishap reports does not expose any apparent commonality among the causes of these mishaps. Three of the mishaps occurred while conducting low level training at night; two happened during takeoff; and one took place during a taxiback landing. One of the mishaps was the result of impacting the ground during a night terrain avoidance bomb

run; one from departing controlled flight during a climbing turn during low level; another crashed only 48 seconds into the mission; one caught fire while on the runway; one was destroyed during the descent into low level and one very surprised crew never got airborne. What in the world could these mishaps have in common?

It takes a little effort but eventually one common thread can be found weaving through the testimony and analysis of each investigation report. All but one of these mishaps were the direct result of human error! Not pilot error, nor crew error, nor supervisory error, but human error! Five perfectly good aircraft destroyed and 21 lives lost not because a part or a system failed to perform correctly, but because human beings made incorrect decisions at critical times. For some reason the human component of the man-ma-

chine interface failed to function properly.

Is there something about the last 90 days of a year which is particularly conducive to human error mishaps? The honest answer is we really don't know for sure because the techniques for conducting human factor investigations are still being developed. The USAF School of Aerospace Medicine conducted preliminary studies on the role of human factors in aircraft mishaps. While there is still much to be learned, one result of these investigations is very clear: stress reduces the capacity of human beings to cope with the demands placed upon them. Figure 2 is the model developed to explain a typical human factors mishap profile. As long as the capacity to cope exceeds the demands, the critical interface cannot occur and a human error mishap is avoided. The problem surfaces when demands exceed our capability.

Early analysis has established beyond any question that stress reduces the aircrew member's capability to cope. Stress, which can be a function of financial concerns, a recent family argument, a sudden death in the family, an illness, or anything else that falls into the broad category labeled "personal problems" compounds the apparent magnitude of the demands placed upon us by reducing our capability to react correctly to those demands. In other words, we become so involved with personal problems, either consciously or subconsciously, that we cannot devote the required attention to the tasks which must be performed.

The last 90 days of the year obviously contain many elements which can result in distraction or deterioration of concentration great enough to permit a human error. No other period of the year contains as many significant

Figure 1

SAC FIVE YEAR FLIGHT MISHAP HISTORY

(Major Accidents/Class A Mishaps)

Month	1980	1981	1982	1983	1984	Total
January		2				2
February						0
March		1				1
April				1		1
May						0
June				1		1
July	2				1	3
August						0
September	1					1
October	1	1			1	3
November			1			1
December			1		1	2
TOTAL	4	4	2	2	3	15

family holidays. Thanksgiving, Christmas, and New Year's Eve, three of the more significant holidays we celebrate, all occur within the last three months of the year. While these holidays are obviously the source of great joy and are anticipated each year, they are also the origin of many stresses which can reduce our capacity to cope. This also happens to be the time of the year we must change from "good" flying to the hazardous demands of the winter flying season. Indeed, a period of time with a higher potential for stress could probably not be created.

Human factors may sound like something right out of the Twilight Zone, but it isn't. Considering SAC's recent mishap experience, finding methods of reducing the stresses produced during the last quarter of a year is a prudent mishap prevention strategy. Individual precautions include

being aware of stress and the effect that stresses can have upon job performance; and developing appropriate methods for coping with the stress. Proper diet, adequate rest, a comprehensive conditioning program, and an active and rewarding hobby can help us deal with stress better and enhance our ability to cope with unusual demands. Also, your local flight surgeon can assist you in developing a personal stress management program.

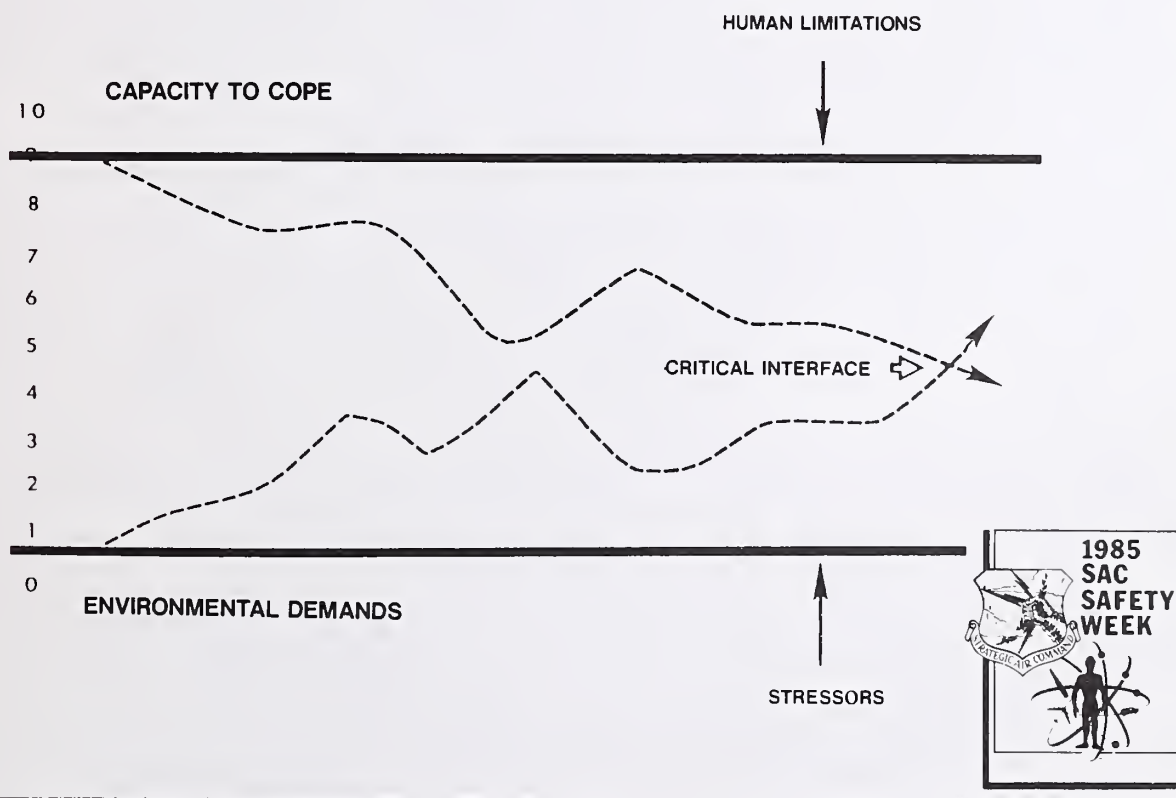
Supervisors also have a very heavy responsibility during this time of the year. They must insure that the crews are ready to handle the increased rigors of winter flying. Training programs must be developed with the human element considered. Flight commanders, operations officers and squadron commanders must be particularly vigilant and take immediate action if the adverse effects of stress become apparent.

The smart ones will learn from experience and recognize that the last 90 days of the year hold extraordinary potential for disaster. The next step is to take appropriate preventive action to insure the human element is maintained as well if not better than the machines.

The signpost is here. We just entered the Twilight Zone of the last 90 days. This year let us recognize the challenge of the last quarter and emerge with SAC's mission capability intact, both people and aircraft. Remember, "Stay alive in '85, keep safety first."

We enter into this year's **twilight zone** having already experienced two Class A mishaps and the tragic loss of ten lives. Captain Taylor has shown us how the mishap potential is now at its highest level, so let's all do our part to keep the last quarter of 1985 mishap free. Editor.

**FIGURE 2
MISHAP PROFILE (TYPICAL)**



EPITAPH FOR A FOOL

Maj Jim McReynolds wrote the following poem to emphasize the possible results of the compounding effect when job conflicts, personal problems, and lack of professionalism coincide.

Submitted by Capt W. J. "Dub" Splawn
2BMW KC-10 Flight Safety Officer

*"I know you're gonna like it here,"
The veteran lieutenant said.
"Life is pretty casual and
Everything's spoon-fed."*

*So I jumped right in and filled some squares,
And very soon checked out.
I wasn't terribly proficient,
But could find my way about.*

*A few requirements
Overlooked
I was gonna catch them later.
But catching up
Is like running up
The "down" side escalator.*

*And then, the new job took my time,
Had to let a few things slide.
Thank goodness for a Santa Claus,
On my instrument check ride.*

*He understood my problems
And let me show up late.
He had to lower his standards,
You see, I wasn't great.*

*Pressure at the office
And more at home
You know, it isn't fair!
What the hell
Does everyone want?
I can't be everywhere!*

*And what if my knowledge
Is a little bit weak
And I don't fly so hot.
Procedures are rusty —
("Well, the Dash One changed!")
Man, is my confidence shot!*

*Now flying has gotten
To be a drag.
Something to avoid.
They pick on me;
I'm always wrong.
No, I'm not paranoid.*

*The pressure's mounting
Here in my head —
My brain has lost control.
My mind is still
Back at base ops
But the body's on takeoff roll.*

*I wasn't really thinking
As we climbed into the night.
Just a moment's inattention
Made this my final flight.*

*No, this accident didn't "just happen" —
It had been coming for a while.
The bosses overlooking their troops' mistakes
With a sigh, a shrug or a smile.*

*Oh, the board will nail the causes down
Of that you can all be sure
They'll find the pilot's abilities
Weren't really all that pure;*

*That the commander wasn't commanding,
That the stand eval was meek;
That the maintenance was slipshod,
And the safety program weak.*

*But regardless of what the board may find
And the facts that are made known,
The ultimate responsibility
Is each man's on his own.*

*As a willing co-conspirator
In the breaking of the rule
He has authored for his efforts —
An epitaph for a fool.*



SPREAD THE WORD

Maj Jim Leland
CFIC, Carswell AFB

Ask a CFIC candidate what he or she expects to gain from attending CFIC and the reply will probably be, “new techniques.” That is in fact one of the important aspects of the course. Having a variety of techniques in your instructor arsenal improves the chances of solving the learning equation for every one of your students.

Notwithstanding this vital goal of CFIC, we’ve encountered a puzzling problem. While we are in fact teaching a variety of techniques, for some reason we are not seeing them being fed back to us in the form of fundamental “lore” possessed by the new candidates who pass through our doors. The techniques go out with the grade, but aren’t coming back in the abilities of their students out in the wings!

This month we want to examine several possible reasons why instructors may not be exposing their students to the techniques taught here.

First, and perhaps most obvious, many new instructors may not feel proficient with some of their newly learned techniques. Lacking confidence, the instructor is unlikely to teach the information. No instructor wants to be accused of teaching students to “do as I say, not as I do,” a certain way to lose credibility. The solution is simple — the instructor must practice the technique until acquiring the requisite proficiency and confidence with it. Don’t let your CFIC experience go for naught — work your new found skills until they become a solid part of your trade.

Another obstacle may stem from the instructor’s belief that the technique is common knowledge and that students may be offended somehow if it is taught to them. Stop and think of the time you may have looked for an object in a picture, but could not see it until someone pointed it out to you. As an instructor, never assume something is obvious. Indeed, instruction often

consists of simply pointing out the obvious in ways that are meaningful to the student.

What about finding more opportunities to teach other than in formal situations, i.e., the classroom, mission planning room, airplane, simulator, etc? Don’t miss out on the chance to instruct during informal moments, such as when a “student” wants to talk about a particular experience while passing in the hall or at the coffee bar. The good instructor will recognize this as something more than a “bull session” to tell war stories, and will seize the opportunity to pass on information and techniques. In fact, why not go one step further and initiate such opportunities by developing informal hangar flying sessions during alert or TDY.

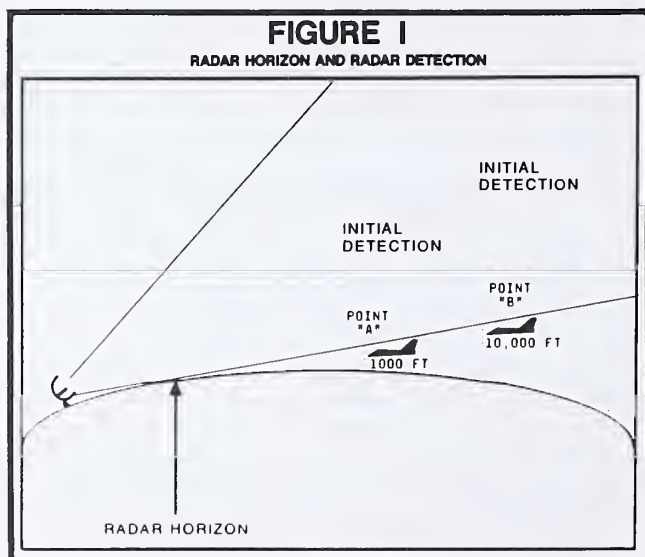
A final thought — what about the quality of training programs at the squadron and specifically, training flight? How effective are its training programs? Does it have a class or time specifically devoted to passing new information to line crewmembers? Does it promote hangar flying sessions? Certainly all training flights do some or all of these to a certain degree, but there is always room to improve. If you have an idea how your unit training program can be more effective, share it with those who can make it happen.

In conclusion, we have examined several reasons why some instructors are not spreading the word. The list is by no means exhaustive, nor are our proposed solutions. However, we hope that we have provided a catalyst which will enhance the chain reaction essential to ensure that information and techniques pass from our experienced CFIC instructors through our graduates to the grass roots squadron level. As our experience is shifted from one weapon system to another such as from the B-52 to the B-1B, it is even more important that the pipeline of information and experience flow freely. Until next month, remember — **Fly the airplane!**



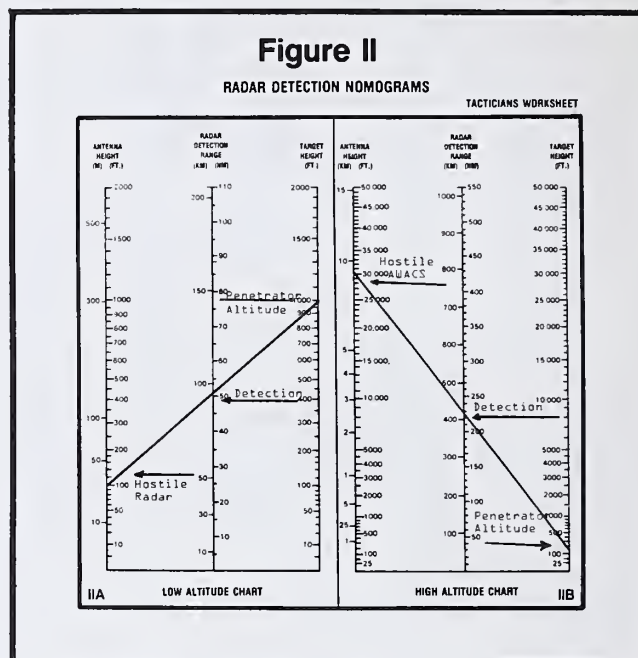
SAC Tactics School
Nellis AFB

In the July and August issues of Combat Crew, we described a rigorous technique for preparing radar site coverage diagrams. This technique accounts for earth curvature terrain masking, and atmospheric refraction, and yields a precise template of radar site coverage at selected TA altitudes. For some applications, such as flat terrain or over the ocean's surface, a simpler method is called for. For these situations, the Tactics School has developed radar detection nomograms. (See Figure I.)



Radar detection is limited by the point at which a radar beam is tangent to the earth's surface. This point is referred to as the "radar horizon." Aircraft flying at 10,000 ft will cross into the radar's line-of-sight at Point "B." At 1000 ft, however, this aircraft remains undetected until Point "A."

The Radar Detection Nomogram is a simple method of predicting when an aircraft will cross into a radar's line-of-sight. Figure II illustrates two nomograms. When both the radar antenna and the target aircraft are below 2000 ft (500 meters), the low altitude chart should be used. For all other cases, use the high altitude chart. Place a straight edge between the radar antenna height (at the left of the chart) and the aircraft height



(at the right of the chart). Read the horizon-limited radar detection range in nautical miles (or kilometers) at the point where the straight edge intersects the center line of the chart. In Figure IIA, an aircraft flying at 1000 ft AGL will first be detected at 51 NM by a radar mounted 100 ft AGL. Another application is illustrated in Figure IIB. In this case, a hostile AWACS flying at 30,000 ft is paired with a penetrator flying at 200 ft AGL. Maximum detection range, in this case, is 229 NM. Figure III is provided as a sample worksheet.

A word of caution, the nomogram predicts the point at which an aircraft will cross into a radar's line-of-sight. This is the absolute maximum detection range of any radar regardless of its performance characteristics. The nomogram does NOT predict actual radar detection ranges. Actual radar detection range is determined by the parameters of the individual radar in question. In many cases the actual detection range will be significantly less than the radar's line-of-sight as predicted by the nomogram. Additionally, the nomogram does not account for topography or terrain masking and may only be used over flat terrain or the ocean surface for accurate results.

Despite these limitations, the nomogram is an extremely useful tool for the tactician, particularly for maritime applications or for use in initial overwater penetration of a hostile land-mass. Radar detection nomograms are now available from the Tactics School and may be ordered by unit tacticians. **Good luck and good hunting.**



Figure III

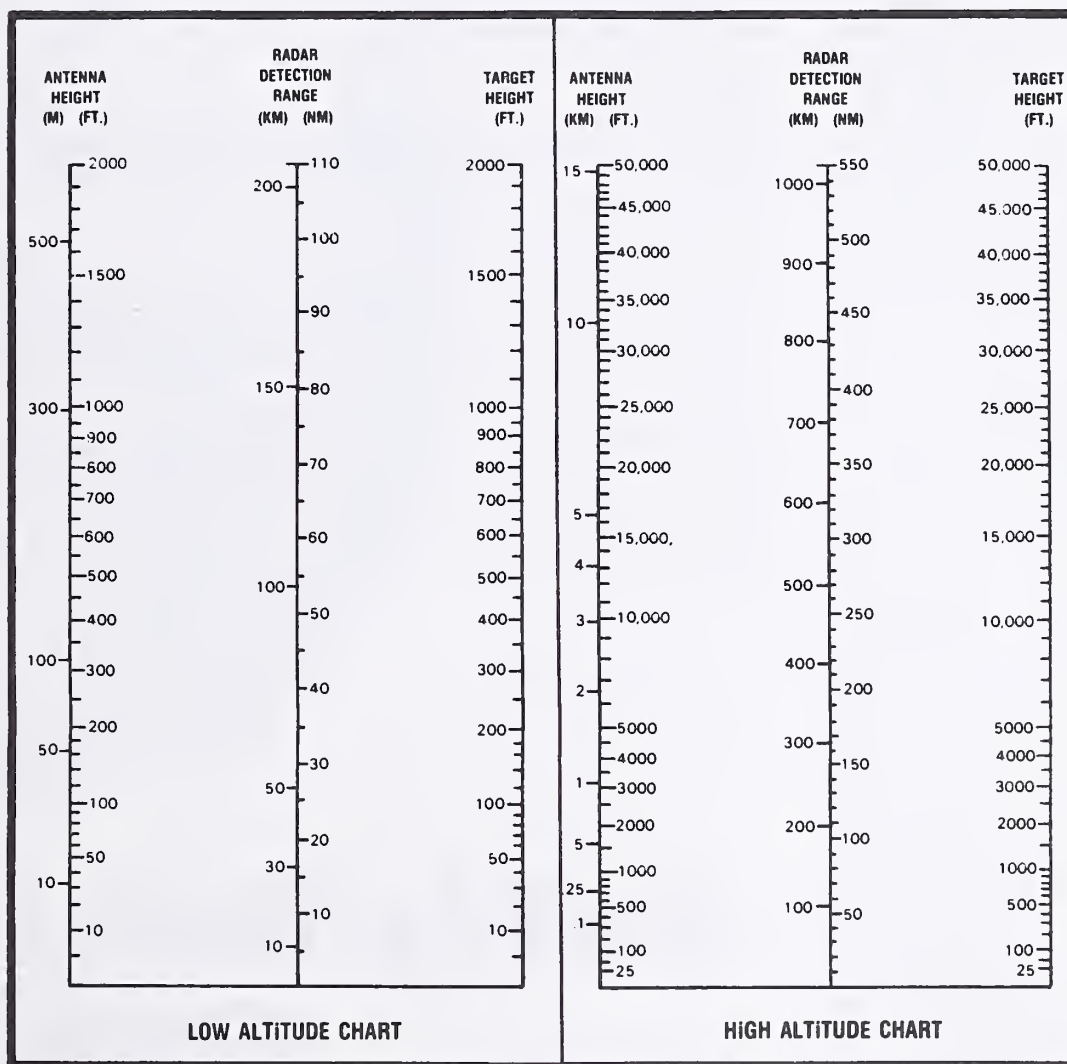
SAC TACTICS GROUP

OLNL 4201 TEST SQUADRON/STG

NELLIS AFB, NEVADA 89191

RADAR DETECTION NOMOGRAMS

TACTICIANS WORKSHEET



Use the low-altitude chart when both antenna height and target height are below 2000 ft or 500 meters. In all other cases, use the high altitude chart. Place the straightedge between the antenna height (at the left of the chart) and the target height (at the right of the chart). Read the radar detection range (horizon-limited) in nautical or kilometers at the point where the straightedge intersects the center line of the chart. This nomogram does NOT account for topography or terrain masking and may only be used in flat/rolling terrain or the ocean surface for accurate results.

In 1948, the Strategic Air Command initiated one of the oldest traditions in the United States Air Force, the Bombing and Navigation Competition. Throughout its 29 year history, this competition has maintained four objectives. They are: to demonstrate strategic bomber and tanker capabilities; promote international relations in a friendly competitive environment; test new equipment, procedures, tactics and concepts; and enhance esprit de corps by recognizing crew and unit professionalism.

The three week competition showcases the top crews in Strategic Air Command, Tactical Air Command, and the Royal Air Force, all vying for the distinction of the "Best of the Best." Crews will be competing for 12 bomber trophies and the best crew award. The best crew award is awarded to the crew in each type of participating aircraft accumulating the highest percentage of points during the competition sorties for all activity. The coveted Fairchild Trophy is awarded to the SAC collocated bomber-tanker wing compiling the highest number of competition effectiveness points during 10 competition missions.

For the competitors, the competition started 1 February when the crew selection process began. All crews were selected by 1 July.

The actual bomber competition sorties are divided into two phases. Phase one includes a day mission which consists of high altitude bombing, time control to the target, and electro-magnetic countermeasures (ECM) at Bismarck, ND. After high altitude activity, each crew will be evaluated during a low altitude route (IR-442). Each aircraft will enter the route over Lemmon, SD and fly low altitude (approximately 500 feet above ground level) and attack seven simulated targets, four with simulated scored bombs and three with simulated scored Short Range Attack Missiles (SRAM). All B-52 crews will be evaluated flying terrain avoidance (terrain following for F/FB-111/Tornado aircraft), time control to the targets, and electro-magnetic countermeasures (ECM). Target areas are located in the vicinity of Eureka, Lemmon, and Belle Fourche, all in South Dakota; and Forsyth, MT. Additionally,

ECM will be evaluated at Powell, WY. The low altitude route is approximately three hours and 20 minutes for B-52s and two hours and 40 minutes for F/FB-111/Tornado aircraft. The sorties will be flown on the 7th and 8th of October and each crew will fly one sortie. The second part of phase one begins with a high altitude bomb run flown against a different target at Bismarck. The axis of attack will also be approximately 165 degrees different than the first mission. The mission will again consist of high altitude bombing, time control, and ECM. The low level portion of the mission will be flown on IR-441 which is IR-442 backwards. Aircrews will again simulate attacking seven targets, four bomb and three SRAM. Again ECM will be evaluated at Powell. Target areas will be located in the vicinity of Forsyth, Belle Fourche, Lemmon, and Eureka. The night sortie will be flown the 14th and 15th of October. All bombing, SRAM, and ECM will be scored using fixed radar sites by the 1st Combat Evaluation Group, Barksdale AFB.

The tanker sorties will be flown the days of the 11th and 12th of October and the nights of the 17th and 18th of October. The tanker competition evaluates each crew during an air refueling orbit exercise, a radar precision leg, a day/night celestial navigation leg, and



SAC's Bombing Competition

May 1978
HQ SA



a inertial navigation system leg. The exercises will be scored for position and time at Belle Fourche, Lemmon, Hastings, NE and La Junta, CO. Again, the 1 Combat Evaluation Group will score the crews using radar fixed sites at the aforementioned locations.

As previously mentioned, the 1985 Bombing and Navigation Competition will feature crews from the Royal Air Force, Tactical Air Command, and the best Strategic Air Command has to offer. Representing SAC are crews from 14 bombardment wings, 29 refueling units including the Air National Guard and Air Force Reserves. Representing TAC are two crews from the 27th Tactical Fighter Wing. In addition, two teams from the RAF's 27th Squadron will compete.

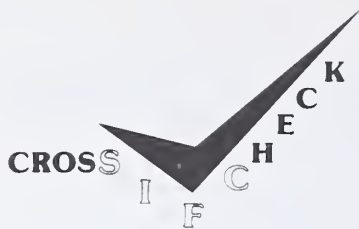
Strategic Air Command bomb wing competitors include two bomber and two tanker crews from each unit with the exception of the 93rd and 380th CCTS instructor personnel. Additionally, two KC-135 crews from three Air National Guard units with one crew from two units making one additional team (four units total) and two KC-135 crews from three USAF Reserve units will also participate. Furthermore, two KC-10 crews will compete from the active/reserve associate units at Barksdale and March Air Force Bases. Tactical Air Command will be repre-

sented by F-111Ds from Cannon AFB, NM and the Royal Air Force is again participating with the Tornado aircraft. The RAF participated last year for the first time since 1979 with their new swing-wing fighter-bomber, and won the Meyer Trophy for the best F/FB-111/Tornado and the LeMay Trophy which is awarded to the best B-52/F/FB-111/Tornado crew. This was the first time a unit other than a FB-111 unit had won the Meyer Trophy. The RAF will again be hosted by the 28th Bombardment Wing and the 44th Strategic Missile Wing at Ellsworth Air Force Base.

Introduced for last year's competition was the use of inert weapons. Phase one of BOMB COMP 84 included the release of practice bombs in the Nellis Bombing Range. BOMB COMP 85 will again include the release of practice weapons. All bomber aircraft will fly a low level route (IR-126) with the entry point in southern Utah and the exit north of Las Vegas. The addition of the live drops to the competition has added more realism to an already challenging competition and provided Strategic Air Command with additional information regarding aircraft release systems. As of last year, the bombers will again try to make their way to the target area while defending themselves against fighter interceptor aircraft. Units are encouraged to use new ideas, techniques, tactics, and innovative procedures they deem necessary to avoid or negate the fighter threat. Every part of the competition is analyzed and applied to training and in some cases actual war plan procedures are revised and implemented.

The Strategic Air Command is continually searching for ways to improve force effectiveness. A competitive environment is vital to the search for excellence. After each competition, each sortie is analyzed and a compendium of lessons is assembled and discussed by the competitors at the symposium to be held at Barksdale AFB on November 12-14. The lessons learned become the basis for substantial changes in doctrine, training, system modifications, tactics and techniques. This is the real payoff in terms of better war-fighting capability — and a greater return on the defense dollar. Good luck to each of you!

And Navigation on — 1985



ICAO Circling —



SIFC Staff, Castle AFB

Have you had to circle to land recently? Have you practiced a circling approach in the last six months? My guess would be probably not, because most bases have published instrument approaches to their runways, and we don't need to circle to land. Further, at many locations it's virtually impossible even to get clearance to circle, since it disrupts the normal traffic flow. But the day is coming when your circling skills will be tested. There has been a resurgence of interest in the circling maneuver at the command level. SAC aircraft are operating at more overseas locations than before and many of these bases don't enjoy the same level of NAVAID coverage or variety of available approaches that we've grown accustomed to here in the United States. Crews are finding that the circling maneuver is sometimes the only viable alternative when

the weather is less than VFR. The purpose of this article is to acquaint you with the information you need in order to fly the maneuver "over there" (ICAO).

Answer this question for 20 points: *What procedures will you use to fly a circling approach "over there?"*

a. The circling procedures prescribed in AFM 51-37.

b. The circling procedures prescribed in ICAO Aircraft Operations, Vol 1 Flight Procedures, paragraphs 4-5, and 4-6.

If you savvy test takers selected the longest answer, you get 20 points. But fear not, even though you haven't read the manual, nothing has changed drastically. There are some subtle differences we need to talk about, however. One concerns the visual maneuver itself, and the other concerns leaving the circling MDA to land.

The circling maneuver is, by

definition, a VISUAL maneuver. Visual with reference to what? AFM 51-37 requires us to keep the "airport environment" in sight while circling. The airport environment is defined as the runway(s), its lights and markings, taxiways, hangars, and other buildings associated with the airport. Once we determine that the ceiling and visibility allow us to keep the "airport environment" in sight we may continue the circling approach. ICAO procedures state that the "runway environment" is defined as the runway threshold or approach lighting aids or other markings identifiable with the runway. Do you see the not so subtle, and important, difference? ICAO procedures require considerably less to look at and therefore to work with during the maneuver. The difference between airport and runway environments is a distinction you need to think about and plan

for ahead of time. Some other important considerations include the direction you'll turn, and whether the visibility and your choice of direction will allow you to keep the runway in sight. How will you execute the missed approach if you lose sight? Remember, Murphy's Law states that when you have to circle for real, the ceiling and visibility will be right at the minimums required. You'd better be prepared.

After maneuvering successfully, you still have a major decision to make. When can you leave the circling MDA and land the aircraft? AFM 51-37 guidance tells us not to descend "until in a position to place the aircraft on a normal glidepath to the landing runway." We work with the whole "airport" environment, and can use anything that helps us determine our "normal glidepath." ICAO procedures state:

DESCENT BELOW THE CIRCLING MDA SHOULD NOT BE MADE UNTIL:

1. Visual reference has been established and can be maintained.
2. The pilot has the landing threshold in sight.

3. The required obstacle clearance can be maintained and the aircraft is in a position to carry out a landing.

Notice that the ICAO procedures are very specific: the pilot needs to see the threshold before he departs the MDA. Lastly, using either procedure, once you descend out of the MDA you've left your protected airspace behind. You need to visually clear yourself around any remaining obstacles between you and the runway.

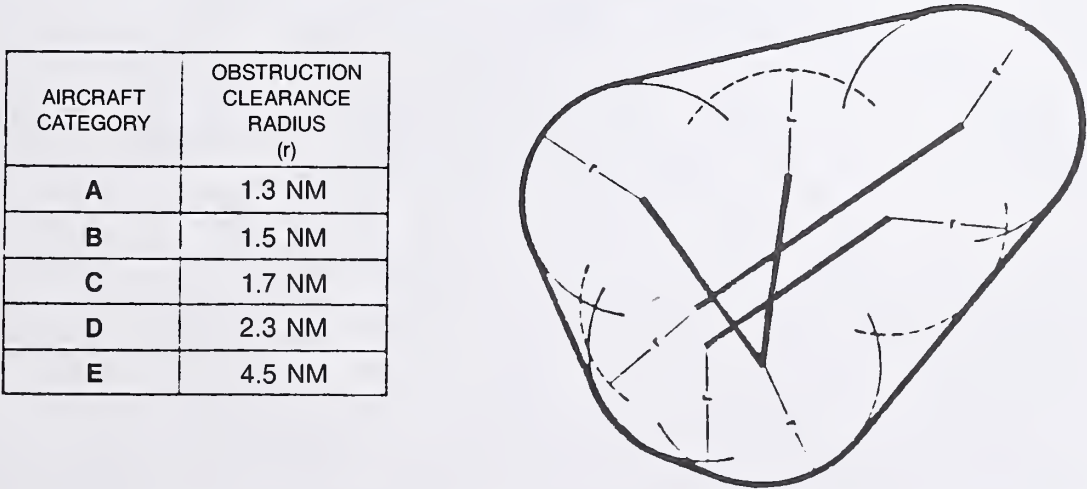
Figure 1 shows the circling approach area chart from AFM 51-37. The FAA and armed services approach designers protect various amounts of airspace based on aircraft category. The ICAO designers use the same definition as we do for aircraft category. However, we can't show you a chart of ICAO protected airspace because ICAO designers also include extra airspace based on field elevation. ICAO protected airspace will always be as large as, or larger than "our" protected airspace. Since you have no way of telling exactly who designed the

particular circling approach you might be tasked to fly, stay within the airspace shown for your aircraft category in figure 1. That way obstacle clearance will be guaranteed no matter who designed the approach.

- To recap, when you circle "over there":
1. Keep the **RUNWAY ENVIRONMENT** in sight while circling.
 2. Don't descend out of the circling MDA unless the runway threshold is in sight.
 3. Remain inside the circling approach area, figure 1, while circling, even though the ICAO area might be larger.

Now that you're acquainted with the procedural differences of the ICAO circling maneuver, hopefully you'll be better prepared when it's your turn to fly one. Next month we'll talk about visual illusions, visibility considerations and some techniques to help you stay within the circling approach area and keep the runway environment in sight. If you have any questions before then, see one of your IPs, or give us a call at AV 347-4571.

**FIGURE 1
CIRCLING APPROACH AREA**





The Case for the Self-Study Habit

Capt D. A. Boxwell
4315 CCTS

The adage "An army marches on its stomach," was attributed to Napoleon in the early nineteenth century. Today, however, military forces faced with increasingly complex weapon systems need to be more than well-fed to accomplish their appointed missions. We are more than merely extensions of primitive weapons — we are the operators and maintainers of technologically advanced systems. In short, our missile and aircraft weapon systems could not function, and the fundamental responsibility of defending the nation's security and preserving peace would quickly wither in the heat of battle, were it not for skilled and knowledgeable professional people at the helm.

This observation begets a basic question: namely, how do we best maintain our skilled professionalism when operating and maintaining our weapon systems? Obviously, formal recurring training and evaluation are two ways that come readily to mind, since they are such a visible part of our schedules. Yet an equally effective method is something even more basic and highly cost effective: crew self-study. Self-study which is meaningful, productive and therefore contributes significantly to building expertise is a hallmark of many professions. An analogy would be that of a physician who continues to read widely on advances in medicine in such periodicals as the "Journal of the American Medical Association." Is not such a doctor more professional than another who does no self-education whatsoever after leaving medical school?

Similarly, a missile crewmember's education must not end the day after graduation from 4315 CCTS. Certainly, there is a battery of monthly recurring instruction at the unit. But, is this instruction sufficient? Arguably, a couple of hours every month passively receiving programmed instruction in a classroom setting will enable a crewmember to meet at least minimal levels of competency. But more important is the mindset of the true professional, who willingly exceeds those standards by setting up a self-study program with a crew partner to perfect and refine the crew's weapon system and emergency war order (EWO) knowledge. This is a measure of the sense of responsibility which crewmembers have gained — seeking to build on the foundations of their knowledge not simply because they have to, but more importantly because they want to. They recognize the importance of professional knowledge as the basis of sound and judicious decision-making.

This knowledge comes into play when confronted with problems on alert and in the missile procedures trainer (MPT). A crewmember relies on a base of broad expertise to successfully perform. An instructor or evaluator can tell very quickly whether or not a crew has gone the extra mile. The crew with an ongoing self-study program feels and looks more confident in their ability to react quickly and accurately, especially to multiple problems. This crew knows the checklist steps to the point where they "visualize" in advance how a problem may be resolved. They know the "ins and outs" of checklist notes, amplifications and lead-ins to a degree where they can begin anticipating problems pre-

sented on the script. This in-depth knowledge is clearly the difference between a ho-hum qualified rating and a well deserved HQ.

Increased proficiency on alert is also a by-product of extra study, a capability which quickly becomes apparent. For example, weapon system commands initiated at one Minuteman launch control center (LCC) can be monitored by at least one other LCC. As a result, the level of a crew's ability to perform the job correctly becomes well known to their peers. A professional reputation among their associates is readily acquired by crewmembers who are known for delving more deeply into the intricacies of the weapon system. Their expertise is sought out by others in the squadron for advice or help on the job, especially in a stressful environment, such as exercises or emergency situations.

Finally, in addition to mission effectiveness, an equally great payoff from intensive self-study is more thorough knowledge of the safety factors we must deal with as crewmembers. A periodic review of the "Safety Precautions" charts in our technical orders and a heightened awareness of cautions and warnings stated on many checklist procedures will help prevent loss of life and equipment with its attendant impact on readiness, well being and careers.

Integral crew self-study comes naturally to most new crews preparing for their first standboard evaluation. But, making it a habit is another matter. Unit instructors can easily spot crews who frantically seek to make up for lost study time as they feel vulnerable for a recurring annual evaluation. On the other hand, a crew that has consistently put in that extra study all along is far more secure in the face of a prospective evaluation.

So how do you acquire the self-study habit? Perhaps the best way is to spend a half hour or so every alert during a quiet time, with no interruptions, studying with your crew partner. A good point of departure is to take two or three questions from the DOTI/monthly self-study package and use them as the basis to explore checklists indepth. Record questions that arise to ask DOTI instructors when you return to base. Also, do not overlook the associated EWO, security and safety regulations that govern SAC missile operations. Re-reading these periodically, and as they are changed, will keep you up to date and well informed.

These, then, are the products of a habitual self-study program: increased safety awareness; improved field and trainer proficiency; better crew coordination; and enhanced professional standing. A SAC crewmember's knowledge does not end at the completion of qualification training. The ground work is laid at places like 4315 CCTS; but beyond that, it is your responsibility to build on that foundation. Almost two centuries ago, the poet William Wordsworth, describing the "Character of the Happy Warrior," wrote that a true soldier has "a natural instinct to discern what knowledge can perform, is diligent to learn." In our profession, this instinct is absolutely essential if we are to meet our responsibilities to the nation.



CROSS SAFETY FEED

GROUND SAFETY

Three Blind Mice

One. After using gasoline to spot clean grease from his fatigues, an individual placed them into a clothes dryer. Predictably, an explosion occurred a few minutes later, destroying the dryer and a wall of the housing unit.

Two. An NCO poured gasoline on smoldering charcoal in his outdoor grill. The subsequent explosion left him with severely burned face and hands.

Three. A Sgt working in his basement poured gasoline into a bucket to clean some engine parts, and then set the bucket near a gas hot water heater. You guessed it! The fumes ignited, causing considerable damage to one of Uncle Sam's houses.



Some People Never Learn

For the second time in eight months, an individual sustained an eye injury caused by improper handling of a liquid cleaning agent. Although plastic safety goggles were available, they were not worn. While demonstrating the use of the cleaning fluid, it splashed into her eyes. The trainees observing must have been impressed . . .

Where Did He come From?

A civilian operator of a GMV stopped at a busy intersection, looked left and right, and still did not see an approaching vehicle which hit him broadside as he reached the middle of the intersection. Damage to both vehicles totaled \$4,000, but seatbelts saved both drivers from injury.

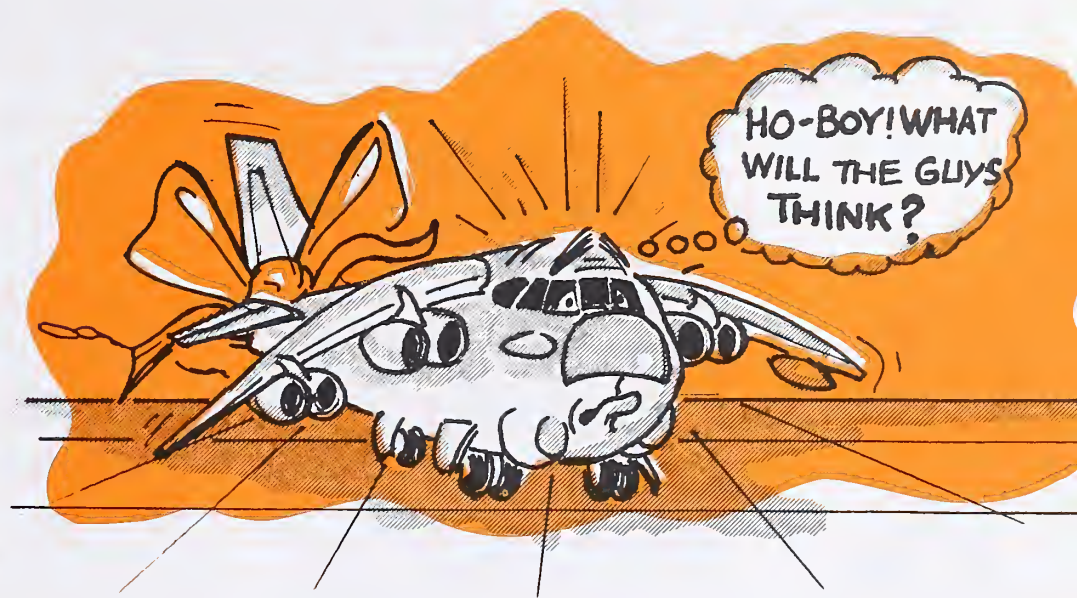
Man Overboard

While instructing a friend in the fine art of sailing, a lieutenant slid from behind the wheel to allow his trainee a chance to steer. As he moved toward the front of the boat, he became entangled in a line, fell partially overboard and was dragged through the water, suffering a severe laceration to his right leg.

FLYING SAFETY

Haste Makes . . .

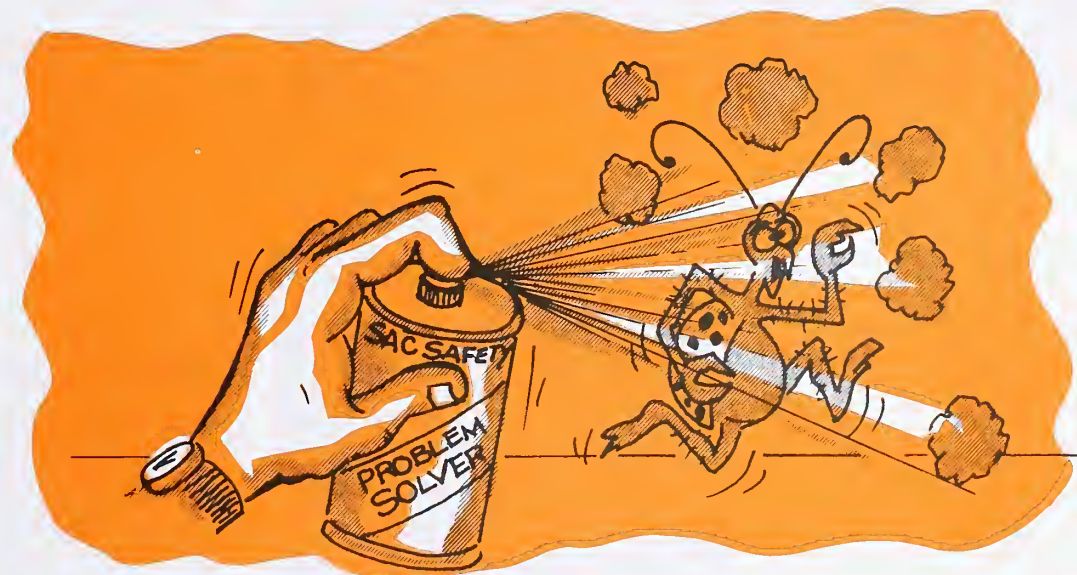
During rollout from a full stop landing, a B-52 was asked by tower to expedite clearing the runway so a tanker on short final could execute a touch and go landing. Trying to be helpful, the B-52 IP elected to make a left turn at the next available taxiway. He cleared the runway and continued taxiing. Just prior to parking, the embarrassed IP was notified that his drag chute was wrapped around the horizontal stabilizer. In his haste to help out his tanker buddy, the bomber driver forgot about the wind direction and velocity, which was 30° off runway heading at 20 gusting to 30 knots. And, just like it says in the Dash One, the chute did its thing.



WEAPONS SAFETY

Getting the Bugs Out

Several deficiencies have been reported in monorail host systems associated with new integrated maintenance facilities. Problems include the hoist jamming; loose screws in the ceiling; brushes off track in corners; motor chattering; hoist not raising or lowering; roller off rail; and others. The potential for a serious accident is present in each of these deficiencies. Inspect your hoist system frequently and report any problems to your local safety office.



Clancy Lowered the Boom

During a missile emplacement, a technician monitoring the pressure of the transporter erector tractor thought he heard someone say "Lower the missile," which he did without confirming that it was safe to do so. Unfortunately, the launcher closure was not yet completely open and the umbilical support clamp hit the closure door.

Watch Your Step

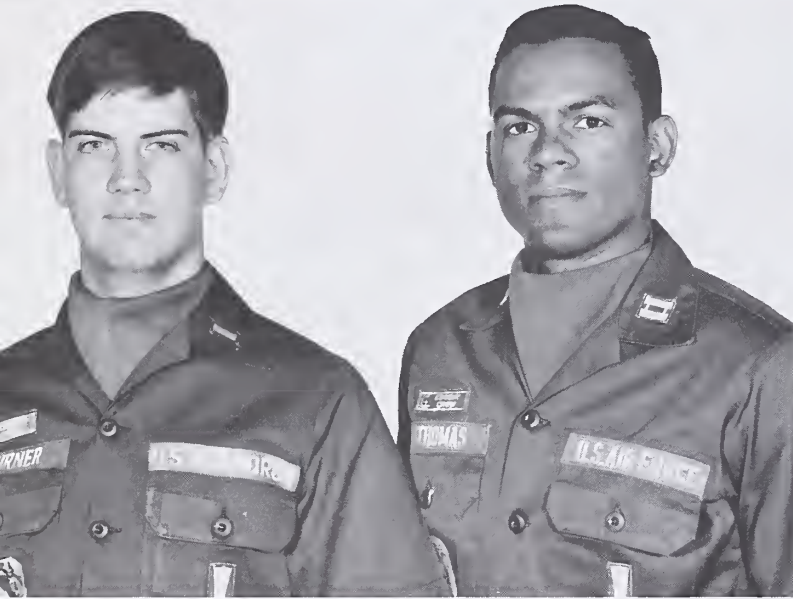
An airman descending a MM primary access shaft ladder lost his footing and fell approximately 12 feet. Inspection revealed nothing wrong with the ladder. The problem was inattention, which cost a severely injured back and feet.

. . . And Your Buddy

There have been two recent incidents where individuals operating jammers struck and damaged weapons. In both cases, other team members were tasked with the responsibility to observe the operation and assist the operator . . . some help!



PROFESSIONAL PERFORMERS



Missile Crew

Crew R-143M/R-104D, Capt Everett H. Thomas, DMCCC and 2Lt Thomas P. Turner, DMCCC, 351 SMW, Whiteman AFB, is SAC's Missile Crew of the Month.

While on alert recently, Crew R-143M/R-104D encountered several potentially serious situations requiring outstanding weapons system knowledge and sound professional judgment. These potentially serious situations included several status problems from another flight's sortie, several serious fault indications, problems with the loss of primary power, and at the same time, the crew handled Olympic Play tests and the Giant Ball Exercise. Before the alert was over, the crew had ran 70 sensitive command network tests, 2 missile tests, 20 enable tests, declared 15 security situations, utilized the LF activities checklists to process on site at LFs a total of 19 times, and ran faults for 19 separate power failures.



Missile Maintenance

Sgt Alan W. Rollo, 341st SMW, Malmstrom AFB, is the SAC ICBM Maintenance Airman of the Month. Assigned to the Scheduling Control Branch, Sgt Rollo has excelled in many areas. He programmed all maintenance efforts for 11 Simulated Electronic Launch Minuteman (SELM) test missiles. Sgt Rollo also organized a recurring TCTO/MCL working group committee among all base agencies to discuss and resolve unit concerns for management and implementation of modifications to Air Force equipment. To improve work procedures Sgt Rollo consolidated all major maintenance programs to eliminate extra field dispatches. His aggressive planning practice will ease the future workload of maintenance teams during the RIVET MILE Program. Sgt Rollo is an outstanding performer in every sense of the word.

Aircraft Maintenance

Sgt Daniel P. Lott, 319 BMW, Grand Forks AFB, is SAC's Maintenance Airman of the Month. Assigned as the ECM flight line supervisor, Sgt Lott insures the combat readiness and effectiveness of 16 B-52G aircraft by being involved in everything from developing maintenance plans to rewriting technical data. He skillfully researched aircraft histories to develop a thorough phase maintenance program. Specific LRUs are removed, aligned in shop, and reinstalled. System trends that reveal a decrease in performance or a history of problems are systematically troubleshoot and repaired. He involved in-shop technicians and flight line specialists and, to insure repairs last, he initiated a follow-up review system. Finally, he integrated this phase maintenance package into the training package for three-level personnel. This concept was put to the test when shop manning went to 40% three levels — it worked with such success that it has been integrated into a squadron program. Sgt Lott's initiative, aggressiveness, tenacity and professional attitude have propelled and sustained his squadron to an unmatched level of excellence.



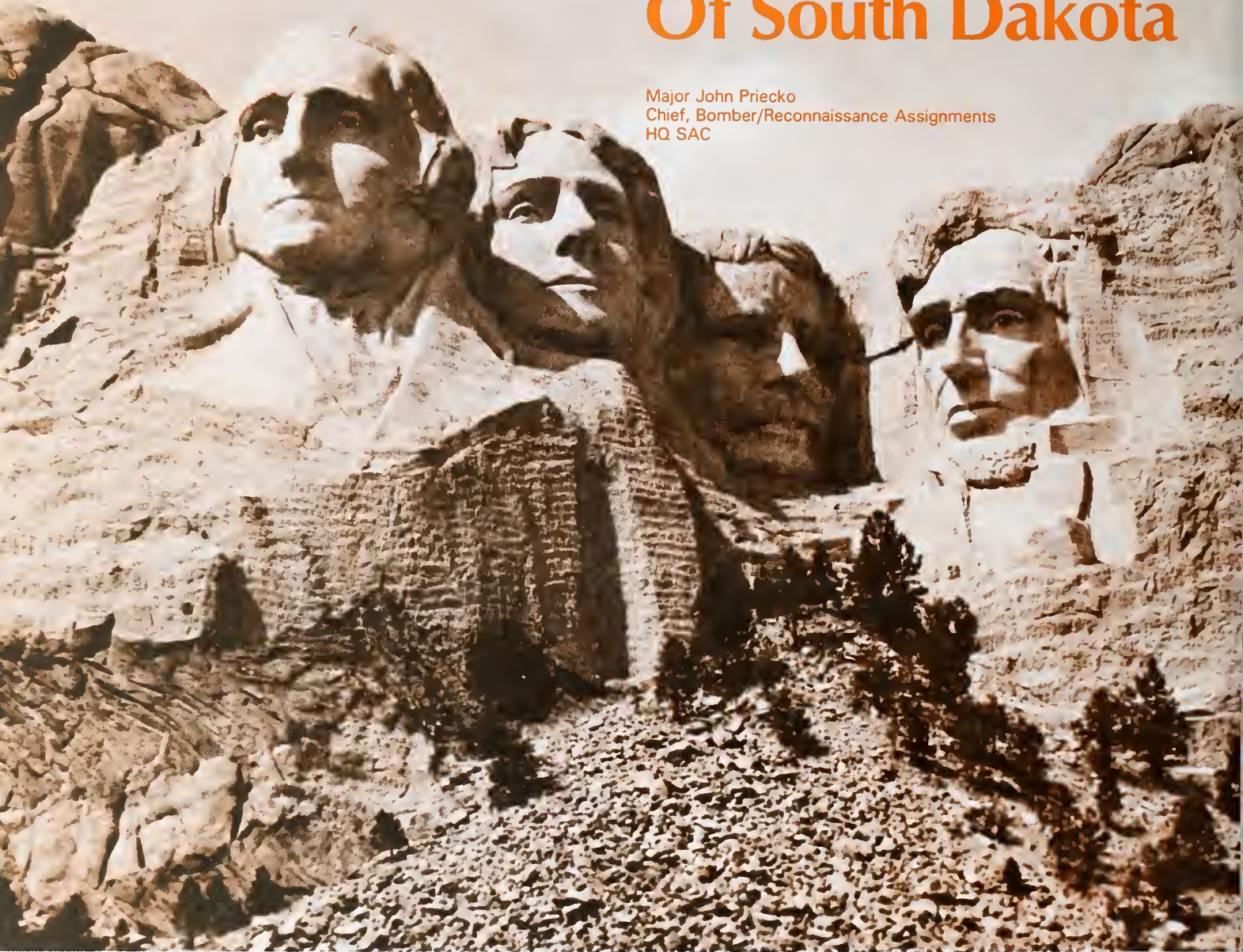
Munitions Maintenance

SrA Daniel N. Simmons, 5th BMW, Minot AFB, is SAC's Munitions Maintenance Airman of the Month. SrA Simmons' leadership ability is reflected throughout the 5 MMS loading section in the professionalism exhibited by those who work with him, the consistently high morale of his load crew, and the enviable record of evaluations he has established. His error-free record of evaluations has now covered 13 quarterly, three MSET and two ORI evaluations. SrA Simmons has been selected by his superiors to participate in three consecutive SAC Weapons Loading Competitions. He was evaluated seven times by MSET during these competitions. Each evaluation was error-free. SrA Simmons' acceptance of additional responsibility is indicative of his dedication. Devoting many off duty hours, he redesigned and built eight consolidated tool kits for the loading section. These modified kits replaced aging equipment while accepting both nuclear and conventional tools and equipment.



B-1B Next Stop . . . The Black Hills Of South Dakota

Major John Priecko
Chief, Bomber/Reconnaissance Assignments
HQ SAC



Just over three months ago the first B-1B touched down at Dyess AFB, Texas. That historic event was a significant step in strategic modernization and sets the stage for future developments in aviation technology. Today, training is well underway as 4018th Combat Crew Training School (CCTS) aviators are learning to fly the nation's newest bomber and to teach others to do the same. While the process to select the first operational B-1B aircrews for the 337th Bomb Squadron at Dyess is nearing completion, another extensive three-phase effort of

choosing crews to man two B-1B squadrons at Ellsworth AFB soon begins.

Phase I (15 October — 15 November) is identification of eligible crewmembers. Candidates will be determined using an objective computer program based on revised CINCSAC/CC approved entry criteria and AF Form 90 volunteers for B-1B duty. Beginning with the Ellsworth aircrew selection, the B-1B program expands to include other rated resources. EC, KC and RC-135 crewmembers, along with lateral command inputs from ATC,

MAC and TAC, will join the B-1B team. Units will provide HQ SAC with standardization/evaluation flight records on every candidate.

Phase II (16 November — 20 December) focuses on quality control as all SAC and lateral command candidates' records are reviewed in preparation for the next step in the process.

Phase III (21 December 1985 — 1 February 1986), board screening, will evolve and change somewhat, becoming similar to the aircrew selection procedures currently used to choose highly qualified aviators for the FB-111 and



B-1 Photos by Maj John Priecko

OCTOBER 1985



This "D" model B-52 is already history. For the "Blackhills Bandits" of Ellsworth AFB, the "H" model will soon follow suit as the B-1B comes to South Dakota late in 1986.

ELLSWORTH B-1B AIRCREW SOURCING (42 Crews)

AIRCRAFT COMMANDERS

B-52	30
EC/KC/RC-135	6
FB-111	2
Dyess B-1B	4

COPILOTS

B-52	32
EC/KC/RC-135	6
MAC	2
ATC	2

OFFENSIVE SYSTEMS OFFICERS (OSOs)

B-52	30
EC/KC/RC-135	6
FB-111	2
Dyess B-1B	4

DEFENSIVE SYSTEMS OFFICERS (DSOs)

B-52	34
EC/RC-135	2
TAC	2
Dyess B-1B	4

As efforts progress at Dyess with work well underway at Ellsworth, Grand Forks and McConnell, extensive B-1B flight testing continues at Edwards.



B-1B NEXT STOP . . .

KC-10. Flight records will again play an important role. The selection board will take a "whole officer" approach with special emphasis on flying skills, duty performance and potential.

Names should be released early in February 1986, with crews reporting for training at Dyess from June 1986 through February 1987. Forty-two crews, 168 individuals, will be selected. The majority of the B-1B Ellsworth

crew force will come from B-52, EC/KC/RC-135 and FB-111 rated resources with some lateral command representation. Additionally, four B-1B "experienced" aircrews (less copilots) will be provided by Dyess to become the core of B-1B flying expertise at Ellsworth. Individuals and alternates will also be identified to backfill B-1B CCTS flightline, academic instructor and curriculum development manager positions.

The B-1B manning effort is obviously in full swing. It's an ongoing project which will last for years. Right behind the Ellsworth aircrew selection process, two more B-1B bases will soon follow. Beginning in June 1986, the ef-

fort to identify 21 B-1B aircrews for Grand Forks AFB will begin. Soon after, October of 1986, the process to pick 21 crews for McConnell AFB and provide the last seven crews for the Dyess operational squadron will get underway.

All in all, it's a tremendous task for everyone involved, still with many unknowns. Bringing on a sophisticated, new weapon system is and will always be a challenge. To date, it's been a sustained effort by thousands of professionals, civilian and military. Based on everything I've seen, I am convinced that the present level of productivity and dedication to the mission will continue.



ELLSWORTH B-1B AIRCREW SELECTION CRITERIA

- MINIMUM FLIGHT EXPERIENCE REQUIREMENTS:

-- Aircraft Commanders

- SAC (B-52, FB-111, EC/KC/RC-135)
 - 1800 total flying hours
 - 3 years in a SAC weapon system
 - 18 months as an aircraft commander

-- Copilots

- SAC (B-52, EC/KC/RC-135)
 - 750 total flying hours
 - 1 year in a SAC weapon system
- LATERAL COMMANDS (ATC & MAC)
 - 750 total flying hours

-- Offensive Systems Officers

- SAC (B-52, FB-111, EC/KC/RC-135)
 - 1500 total flying hours
 - 3 years in a SAC weapon system

-- Defensive Systems Officers

- SAC (B-52, EC/RC-135)
 - 1000 total flying hours
 - 2 years in a SAC weapon system

--- LATERAL COMMANDS

- SAC/TAC exchange program

- GENERAL REQUIREMENTS:

- No current deferments (no passovers in present grade)
- No negative quality force indicators or derogatory assignments availability codes (for example: alcohol/drug abuse, Article 15, Unfavorable Information/Digest File, etc.)
- An Aviation Service Code indicating individual is a "flyable resource."



While the first B-1B arrived at Dyess back in June, training is in full swing for 4018 CCTS aircrews . . . learning to teach others to fly the nation's newest strategic bomber.



SAC

SAFETY

SCREEN



The SAC Safety Screen is an honor roll of SAC's most professional crews. To gain listing on the Screen, crew members must be nominated by their unit commanders and meet high selection criteria of experience in their aircraft or missile system IAW AFR 127-2/SS1.

911 AREFS, Seymour Johnson Crew S-102: P Capt James M Tarlton, CP Capt Mark L Blanchard, N Capt Jerry D Gullion, BO SSgt Larry J Roberts

911 AREFS, Seymour Johnson Crew E-110: P Maj Robert W Slade, CP 1Lt Warren R Cole, N 1Lt Christopher D Campbell, BO MSgt Patrick S Kennedy

384 AREFS, McConnell Crew E-154: P Capt Timothy O Hocking, CP 1Lt John D Christner, IN Capt William J Glovac, IBO SSgt Marion A McElry Jr

91 AREFS, McConnell Crew E-107: IP Maj Marc B Stormont, CP Capt Jean L Combs, N 1Lt Charles R Mayberry, BO SSgt Jeffrey A Wright

310 AREFS, Plattsburgh Crew R-171: P Capt Thomas H Soszynski, CP 1Lt Thomas M Casey, N 1Lt John F Condon, BO A1C Kenneth R Burfiend

376 SW, Kadena Crew R-122: P Capt Larry Appel, CP 1Lt Jay Pandaleon, N 2Lt Stephen A Adams, BO SSgt Harry L Whitacre

325 BMS, Fairchild Crew E-22: P Capt Steven A Radke, CP 1Lt Kirk S Peddicord, RN Maj James M Burson, N 1Lt Barry S Bulter, EWO Capt Blain W Secor, G SSgt Dale O Fraizier

325 BMS, Fairchild Crew E-24: P Capt Dan F Carter, CP 1Lt Joe A Sousa, RN Capt D L Pennington, N 1Lt Paul J McPhee, EWO 1Lt Mark A Spadaro, G MSgt Dan G Watkins

2 ACCS, Offutt Crew R-105: IP Maj John W Staley, CP Capt Mary K Higgins, NN 2Lt Edward L Bohrmann, IB SSgt Thomas S Hurlbutt

7 AREFS, Carswell Crew E-135: AC Capt Norman C Robinson, CP 2Lt Philip L Koppa, N 1Lt Noel J Bourgeois, BO Sgt Castordarryl Franklin

9 BMS, Carswell Crew R-65: AC Capt Mark T Dietsch, CP Capt Laurence S Meeks, RN Capt Raymond D Breeden, N 1Lt Michael R Shoults, EW 1Lt Mark L Cline, G SSgt Donald L Holmes

20 BMS, Carswell Crew S-03: AC Capt Craig Wolfenbarger, CP 1Lt Terry L Westcoat, RN Capt Anthony J Gipson, N Capt Donald L Worth, EW Capt Gary S Wright, G SSgt James J Galambos

69 BMS, Loring Crew E-31: P Capt Mike O'Brien, CP Capt Pat Williams, RN Capt Rick Stuck, N 1Lt Tom Wiswell, EW 1Lt Merritt McEvoy, G A1C Greg Atkison

407 AREFS, Loring Crew S-180: P Maj David Kipfer, CP 1Lt Efrain Marrero, N 1Lt David Mansfield, BO Sgt Terry Casey

42 AREFS, Loring Crew E-111: IP Maj Terrance Lakin, CP 2Lt Robert Popp, N 1Lt Christopher Bradford, IBO SSgt Dale Mitchell

11 AREFS, Altus Crew S-110: IP Capt B J Falkenberg, ICP 1Lt Jennifer Pickett, IN 1Lt Joseph Stephens, IBO SSgt Larry Little

306 AREFS, Altus Crew R-163: P Capt Mark Ward, CP 2Lt Del Williamson, N Capt David Clark, IBO MSgt Steve Miller

715 BMS, Pease Crew E-28: P Capt Steven D Brashear, RN Capt Brian E Kennedy

44 SMW, Ellsworth Crew R-031: MCCC Capt Shelby Kenney, DMCCC 2Lt Thomas McGawley

308 SMW, Little Rock Crew E-162: MCCC 1Lt James Bresette, DMCCC 2Lt Stephen Mentel, MSAT A1C Damien Smith, MFT SSgt Jeraldine Vincent

381 SMW, McConnell Crew R-084: MCCC Capt Ronald E Black, DMCCC 1Lt Kimberly S Pierce, MSAT SrA Frederick Poblete, MFT A1C Jack L Chamblin

FLARE

"Keep A Sharp
Eye Guy!"

"Let's Go
Get 'em Fred!"

IT'S THAT TIME OF
YEAR AGAIN
WHEN MIGRATORY
FOWLS CAN PLAY
HAVOC WITH
SAC'S "BIG
BIRDS!"

